

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR4AENG-L33-935-CA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #4792155668.03

[TESTLAB] UL, LLC

[ISSUE DATE] 2026-08-07

[TEST DATE] 3/17/2026

[MANUFAC] H E Williams Inc

[LUMCAT] CMR4AENG-L33-935-CA-DIM-UNV (A,E&N)

[LUMINAIRE] 2' x 4' multi-function recessed troffer with door frame; door

[MORE] frame has arrangement of curved diffused acrylic lenses

[OTHER] This test was performed using the calibrated photodetector method

[MORE] of absolute photometry.

[OTHER] The reported results were measured in a facility that meets the

[MORE] requirements of ANSI/IES LM-75-19. The device under test emits no

[MORE] detectable uplight as defined by ANSI/IES LM-75-19.

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 10798           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 97              |
| Total Luminaire Watts           | 111.3           |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.22            |
| Spacing Criterion (90-270)      | 1.18            |
| Spacing Criterion (Diagonal)    | 1.30            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.75 ft         |
| Luminous Width (90-270)         | 1.75 ft         |
| Luminous Height                 | 0.00 ft         |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 5989             | 5907              | 5866              |
| 55                  | 5474             | 5476              | 5501              |
| 65                  | 4718             | 4871              | 4932              |
| 75                  | 3393             | 3690              | 3709              |
| 85                  | 1356             | 1556              | 1474              |

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**CANDELA TABULATION**

|     | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
|-----|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0   | 4289.828   | 4289.828    | 4289.828    | 4289.828    | 4289.828    | 4289.828     | 4289.828     | 4289.828     | 4289.828     | 4289.828     |
| 5   | 4274.148   | 4268.406    | 4263.566    | 4252.667    | 4270.200    | 4250.785     | 4260.011     | 4262.969     | 4268.801     | 4263.328     |
| 10  | 4202.431   | 4193.541    | 4184.966    | 4171.584    | 4180.506    | 4167.910     | 4177.737     | 4182.936     | 4189.885     | 4182.130     |
| 15  | 4082.549   | 4070.936    | 4054.502    | 4035.895    | 4042.693    | 4030.428     | 4043.121     | 4053.729     | 4060.832     | 4051.728     |
| 20  | 3917.943   | 3901.578    | 3878.315    | 3854.835    | 3850.411    | 3847.577     | 3862.423     | 3876.634     | 3884.964     | 3873.080     |
| 25  | 3713.271   | 3692.925    | 3663.515    | 3633.679    | 3630.591    | 3624.628     | 3642.395     | 3658.841     | 3667.716     | 3653.972     |
| 30  | 3472.913   | 3449.329    | 3414.819    | 3388.091    | 3377.993    | 3377.396     | 3388.024     | 3405.626     | 3416.992     | 3400.219     |
| 35  | 3200.060   | 3175.986    | 3142.421    | 3120.656    | 3110.337    | 3108.587     | 3110.069     | 3124.785     | 3138.344     | 3120.214     |
| 40  | 2900.230   | 2881.692    | 2852.270    | 2838.886    | 2824.502    | 2825.832     | 2815.468     | 2827.086     | 2838.179     | 2823.740     |
| 45  | 2584.459   | 2567.759    | 2549.012    | 2543.858    | 2531.264    | 2529.878     | 2510.268     | 2513.356     | 2524.568     | 2511.052     |
| 50  | 2257.694   | 2242.958    | 2236.572    | 2241.193    | 2233.573    | 2226.645     | 2198.895     | 2192.318     | 2202.334     | 2190.711     |
| 55  | 1916.091   | 1908.509    | 1916.831    | 1927.018    | 1925.324    | 1912.500     | 1882.427     | 1863.638     | 1867.053     | 1862.464     |
| 60  | 1566.450   | 1568.876    | 1588.638    | 1606.032    | 1610.533    | 1592.386     | 1559.536     | 1530.891     | 1524.500     | 1529.959     |
| 65  | 1216.868   | 1227.229    | 1256.255    | 1268.069    | 1271.982    | 1256.206     | 1233.340     | 1196.914     | 1182.562     | 1196.120     |
| 70  | 863.740    | 883.826     | 914.558     | 922.367     | 922.986     | 913.698      | 898.675      | 861.820      | 837.423      | 861.204      |
| 75  | 535.961    | 560.097     | 582.868     | 583.760     | 585.795     | 579.262      | 574.008      | 546.159      | 517.608      | 545.720      |
| 80  | 259.464    | 281.387     | 291.864     | 283.739     | 279.790     | 282.568      | 288.793      | 274.794      | 248.534      | 274.531      |
| 85  | 72.121     | 84.545      | 82.735      | 78.310      | 78.374      | 78.265       | 82.397       | 83.302       | 67.750       | 83.182       |
| 90  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 95  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 100 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 105 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 110 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 115 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 120 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 125 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 130 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 135 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 140 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 145 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 150 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 155 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 160 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 165 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 170 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 175 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 180 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |

**Vert. Angles**      **Horizontal Angles**

|    | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0  | 4289.828     | 4289.828     | 4289.828     | 4289.828     | 4289.828     | 4289.828     | 4289.828     |
| 5  | 4260.131     | 4250.904     | 4270.320     | 4252.667     | 4262.849     | 4266.942     | 4274.148     |
| 10 | 4177.379     | 4167.790     | 4180.745     | 4171.524     | 4184.190     | 4191.898     | 4202.431     |
| 15 | 4042.165     | 4030.010     | 4042.842     | 4035.865     | 4053.726     | 4069.233     | 4082.549     |
| 20 | 3860.631     | 3846.919     | 3850.501     | 3854.596     | 3877.658     | 3899.905     | 3917.943     |
| 25 | 3639.677     | 3623.552     | 3630.710     | 3633.291     | 3662.499     | 3691.073     | 3713.271     |
| 30 | 3384.469     | 3375.933     | 3377.934     | 3387.642     | 3413.714     | 3447.238     | 3472.913     |
| 35 | 3105.738     | 3106.616     | 3110.068     | 3120.357     | 3140.987     | 3173.775     | 3200.060     |
| 40 | 2811.285     | 2823.561     | 2823.875     | 2838.826     | 2850.567     | 2879.063     | 2900.230     |
| 45 | 2506.952     | 2527.159     | 2530.726     | 2543.559     | 2547.250     | 2564.563     | 2584.459     |
| 50 | 2196.379     | 2223.837     | 2232.856     | 2240.685     | 2235.019     | 2239.732     | 2257.694     |
| 55 | 1880.781     | 1909.692     | 1924.667     | 1926.480     | 1915.098     | 1905.342     | 1916.091     |
| 60 | 1558.398     | 1589.826     | 1610.084     | 1605.643     | 1586.935     | 1565.561     | 1566.450     |

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**CANDELA TABULATION - (Cont.)**

|            |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>65</b>  | 1232.524 | 1254.142 | 1271.513 | 1267.621 | 1254.641 | 1224.032 | 1216.868 |
| <b>70</b>  | 898.137  | 912.474  | 922.582  | 922.012  | 912.969  | 880.905  | 863.740  |
| <b>75</b>  | 573.688  | 578.712  | 585.687  | 583.590  | 581.601  | 557.487  | 535.961  |
| <b>80</b>  | 288.649  | 282.413  | 279.853  | 283.703  | 291.111  | 279.346  | 259.464  |
| <b>85</b>  | 82.373   | 78.271   | 78.436   | 78.375   | 82.552   | 83.756   | 72.121   |
| <b>90</b>  | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>95</b>  | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>100</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>105</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>110</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>115</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>120</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>125</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>130</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>135</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>140</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>145</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>150</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>155</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>160</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>165</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>170</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>175</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>180</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 1545.42  | N.A.  | 14.30  |
| 0-30    | 3227.96  | N.A.  | 29.90  |
| 0-40    | 5187.04  | N.A.  | 48.00  |
| 0-60    | 8845.96  | N.A.  | 81.90  |
| 0-80    | 10678.79 | N.A.  | 98.90  |
| 0-90    | 10798.18 | N.A.  | 100.00 |
| 10-90   | 10393.87 | N.A.  | 96.30  |
| 20-40   | 3641.62  | N.A.  | 33.70  |
| 20-50   | 5599.36  | N.A.  | 51.90  |
| 40-70   | 4882.98  | N.A.  | 45.20  |
| 60-80   | 1832.83  | N.A.  | 17.00  |
| 70-80   | 608.77   | N.A.  | 5.60   |
| 80-90   | 119.39   | N.A.  | 1.10   |
| 90-110  | 0.00     | N.A.  | 0.00   |
| 90-120  | 0.00     | N.A.  | 0.00   |
| 90-130  | 0.00     | N.A.  | 0.00   |
| 90-150  | 0.00     | N.A.  | 0.00   |
| 90-180  | 0.00     | N.A.  | 0.00   |
| 110-180 | 0.00     | N.A.  | 0.00   |
| 0-180   | 10798.18 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 404.31  |
| 10-20   | 1141.11 |
| 20-30   | 1682.53 |
| 30-40   | 1959.08 |
| 40-50   | 1957.74 |
| 50-60   | 1701.18 |
| 60-70   | 1224.06 |
| 70-80   | 608.77  |
| 80-90   | 119.39  |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

| RC | 80  |     |     |     | 70  |     |     |     | 50  |     |     | 30  |     |     | 10  |     |     | 0   |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2  | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 87  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 72  |
| 3  | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |
| 4  | 84  | 72  | 64  | 57  | 81  | 71  | 63  | 57  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 59  | 54  | 52  |
| 5  | 77  | 65  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 58  | 52  | 48  | 45  |
| 6  | 71  | 58  | 50  | 43  | 69  | 57  | 49  | 43  | 56  | 48  | 43  | 54  | 47  | 42  | 52  | 46  | 42  | 40  |
| 7  | 66  | 53  | 44  | 38  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 37  | 35  |
| 8  | 62  | 48  | 40  | 34  | 60  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9  | 58  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 30  | 29  |
| 10 | 54  | 41  | 33  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  |

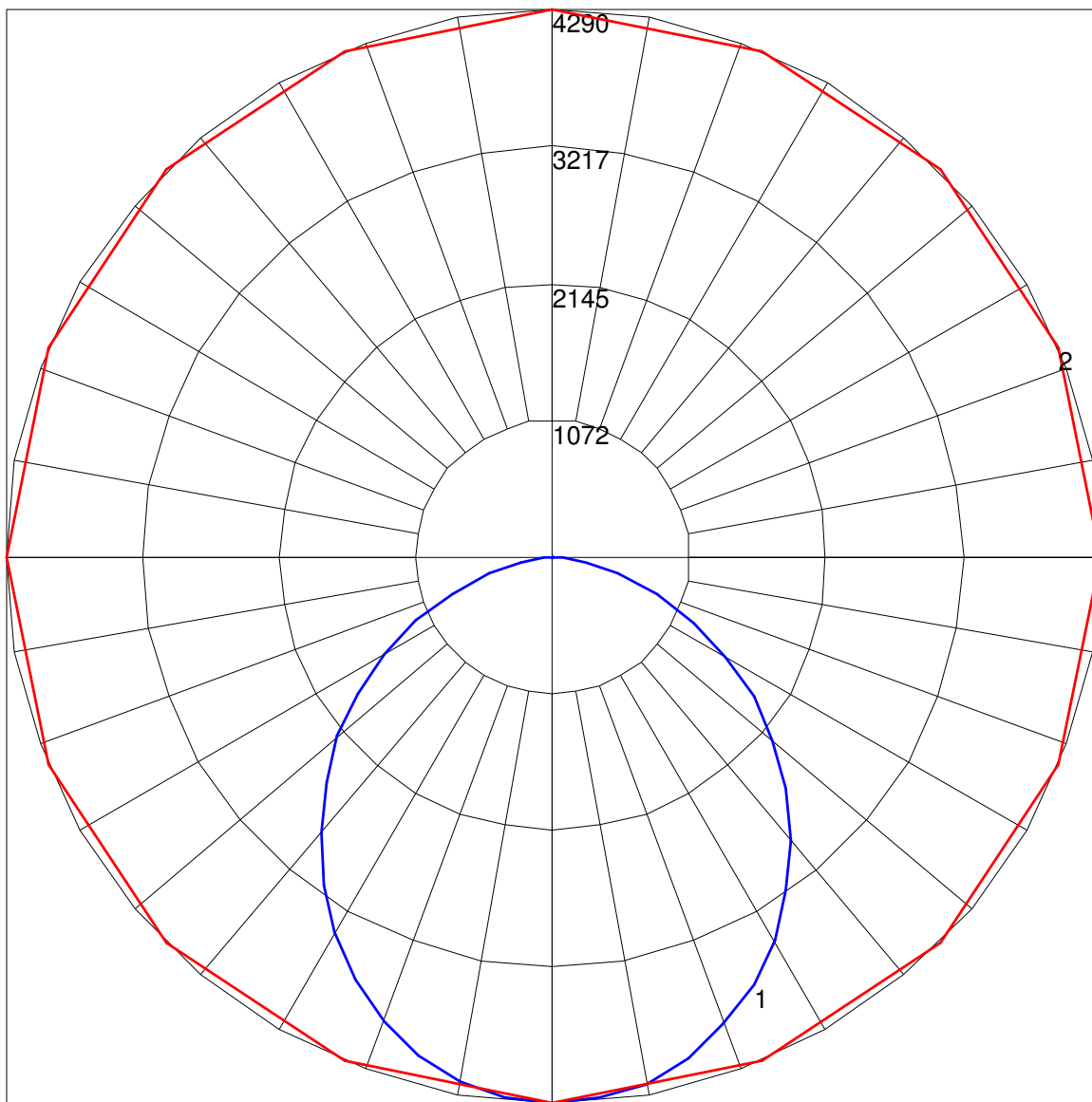
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**UGR TABLE - CORRECTED**

|                |      |                      |      |      |      |      |                    |      |      |      |      |
|----------------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| Reflectances   |      |                      |      |      |      |      |                    |      |      |      |      |
| Ceiling Cavity | 70   | 70                   | 50   | 50   | 30   | 70   | 70                 | 50   | 50   | 30   |      |
| Walls          | 50   | 30                   | 50   | 30   | 30   | 50   | 30                 | 50   | 30   | 30   |      |
| Floor Cavity   | 20   | 20                   | 20   | 20   | 20   | 20   | 20                 | 20   | 20   | 20   |      |
| Room Size      |      | UGR Viewed Crosswise |      |      |      |      | UGR Viewed Endwise |      |      |      |      |
| X=2H           | Y=2H | 18.0                 | 19.6 | 18.3 | 19.9 | 20.2 | 18.0               | 19.6 | 18.4 | 20.0 | 20.3 |
|                | 3H   | 19.5                 | 20.9 | 19.9 | 21.2 | 21.6 | 19.7               | 21.1 | 20.0 | 21.4 | 21.8 |
|                | 4H   | 20.0                 | 21.3 | 20.4 | 21.7 | 22.0 | 20.2               | 21.5 | 20.6 | 21.9 | 22.3 |
|                | 6H   | 20.2                 | 21.5 | 20.6 | 21.8 | 22.2 | 20.5               | 21.7 | 20.9 | 22.1 | 22.5 |
|                | 8H   | 20.3                 | 21.5 | 20.7 | 21.9 | 22.3 | 20.5               | 21.7 | 21.0 | 22.1 | 22.5 |
|                | 12H  | 20.3                 | 21.4 | 20.7 | 21.8 | 22.2 | 20.5               | 21.7 | 21.0 | 22.1 | 22.5 |
| 4H             | 2H   | 18.6                 | 19.9 | 19.0 | 20.3 | 20.6 | 18.6               | 20.0 | 19.0 | 20.3 | 20.7 |
|                | 3H   | 20.3                 | 21.4 | 20.7 | 21.8 | 22.2 | 20.4               | 21.6 | 20.8 | 22.0 | 22.4 |
|                | 4H   | 20.9                 | 21.9 | 21.3 | 22.3 | 22.7 | 21.0               | 22.1 | 21.5 | 22.5 | 22.9 |
|                | 6H   | 21.2                 | 22.1 | 21.7 | 22.5 | 23.0 | 21.4               | 22.3 | 21.9 | 22.7 | 23.2 |
|                | 8H   | 21.3                 | 22.1 | 21.7 | 22.6 | 23.0 | 21.5               | 22.3 | 22.0 | 22.8 | 23.2 |
|                | 12H  | 21.3                 | 22.1 | 21.8 | 22.5 | 23.0 | 21.5               | 22.3 | 22.0 | 22.8 | 23.2 |
| 8H             | 4H   | 21.1                 | 21.9 | 21.5 | 22.4 | 22.8 | 21.3               | 22.1 | 21.7 | 22.5 | 23.0 |
|                | 6H   | 21.5                 | 22.2 | 22.0 | 22.7 | 23.2 | 21.7               | 22.4 | 22.2 | 22.9 | 23.4 |
|                | 8H   | 21.6                 | 22.3 | 22.1 | 22.8 | 23.2 | 21.8               | 22.4 | 22.3 | 22.9 | 23.4 |
|                | 12H  | 21.7                 | 22.2 | 22.2 | 22.7 | 23.3 | 21.9               | 22.4 | 22.4 | 22.9 | 23.5 |
| 12H            | 4H   | 21.1                 | 21.8 | 21.6 | 22.3 | 22.8 | 21.3               | 22.0 | 21.7 | 22.5 | 23.0 |
|                | 6H   | 21.5                 | 22.2 | 22.1 | 22.6 | 23.2 | 21.7               | 22.3 | 22.2 | 22.8 | 23.3 |
|                | 8H   | 21.7                 | 22.2 | 22.2 | 22.7 | 23.3 | 21.9               | 22.4 | 22.4 | 22.9 | 23.5 |

Maximum UGR = 23.5

POLAR GRAPH



Maximum Candela = 4289.828 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)